

CUSTOMER NO.: 24498
Serial No.: 10/520,854

PATENT
PU020335

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicants: John Alan Gervais

Examiner: Kim, Tae K.

Serial No: 10/520,854

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For: APPLICATION LEVEL GATEWAY AND FIREWALL RULE SET DOWNLOAD
VALIDATION

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REPLY BRIEF

Applicants provide this Reply Brief in response to the Examiner's Answer dated
November 9, 2009.

TABLE OF CONTENTS:

1. Status of Claims
2. Grounds of Rejection to be Reviewed on Appeal
3. Argument
 - A. Introduction
 - B. Whether Claims 1 and 16 Satisfy 35 U.S.C. §112, First Paragraph
 - B1. Claims 1 and 16
 - C. Whether Claim 32 Satisfies 35 U.S.C. §112, First Paragraph
 - C1. Claim 32
 - D. Whether Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 are Unpatentable Under 35 U.S.C. §103(a) With Respect to U.S. Patent No. 6,986,133 to O'Brien et al., in View of U.S. Patent Application No. 2002/0152399 to Smith
 - D1. Claims 1, 2, 4, 12, 14, 16, 17, and 21-31
 - D2. Claims 24 and 30
 - E. Whether Claims 11 and 18 are Unpatentable Under 35 U.S.C. §103(a) With Respect to U.S. Patent No. 6,986,133 to O'Brien et al., in View of U.S. Patent Application No. 2002/0152399 to Smith, and Further in View of U.S. Patent No. 6,665,752 to Bernath
 - E1. Claims 11 and 18
 - F. Whether Claim 13 is Unpatentable Under 35 U.S.C. §103(a) With Respect to U.S. Patent No. 6,986,133 to O'Brien et al., in View of U.S. Patent Application No.

CUSTOMER NO.: 24498
Serial No.: 10/520,854

PATENT
PU020335

2002/0152399 to Smith, and Further in View of U.S. Patent No. 6,031,830 to

Cowan

F1. Claim 13

G. Conclusion

1. **Status of Claims**

Claims 1, 2, 4, 11-14, 16-18, and 21-32 are pending. Claims 1, 2, 4, 11-14, 16-18, and 21-32 stand rejected and are under appeal. Claims 3, 5-10, 15, 19, and 20 have been cancelled.

2. Grounds of Rejection to be Reviewed on Appeal

Claims 1 and 16 stand rejected under 35 U.S.C. 112, first paragraph.

Claim 32 stands rejected under 35 U.S.C. 112, first paragraph.

Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,986,133 to O'Brien et al. (hereinafter "O'Brien") in view of U.S. Patent Application No. 2002/0152399 to Smith (hereinafter "Smith").

Claims 11 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien, in view of Smith, and further in view of U.S. Patent No. 6,665,752 to Bernath (hereinafter "Bernath").

Claim 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien, in view of Smith, and further in view of U.S. Patent No. 6,031,830 to Cowen (hereinafter "Cowen").

The preceding rejections under 35 U.S.C. §112 and 35 U.S.C. §103(a) are presented for review in this Appeal.

Regarding the grouping of the claims with respect to the rejection of Claims 1 and 16 under 35 U.S.C. §112, first paragraph, Claims 1 and 16 stand or fall together.

Regarding the grouping of the claims with respect to the rejection of Claim 32 under 35 U.S.C. §112, first paragraph, Claim 32 stands or falls alone.

Regarding the grouping of the claims with respect to the rejection of Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 under 35 U.S.C. §103(a), Claims 2, 4, 12, 14, and 21-25 stand or fall with Claim 1, and Claims 17 and 26-31 stand or fall with Claim 16.

Regarding the grouping of the claims with respect to the rejection of Claims 11 and 18 under 35 U.S.C. §103(a), Claims 11 and 18 stand or fall together.

Regarding the grouping of the claims with respect to the rejection of Claim 13 under 35 U.S.C. §103(a), Claim 13 stand or falls alone.

3. Argument

A. Introduction

In general, the present invention is directed to an application level gateway and firewall rule set download validation (Applicant's Specification, Title). As disclosed in the Applicant's specification at page 1, lines 15-0:

Field upgradeable products are becoming more prevalent in the broadband market today. Devices, such as cable modems and other bi-directional communication devices, may have application level gateways (ALGs) and/or firewall rule sets downloaded remotely to them while in a customer's home or office. Downloading files containing such ALGs and/or firewall rule sets places the device at higher risk for downloading improper file versions, corrupted files, non-authorized files, files that are too large, incompatibility with the device's hardware and/or software, among others.

Downloading an incompatible or corrupted ALG file to a cable modem may cause the cable modem to hang up or crash. Once a cable modem hangs up or crashes, the cable modem becomes inoperable and, typically, requires a service call, illustratively from a multiple systems operator (MSO) service representative or the like, to repair the cable modem.

Therefore, there is a need to validate proper application level gateway files or firewall rule set files being downloaded to a bi-directional communication device such as a cable modem.

The claims of the pending invention include novel features not shown in the cited references and that have already been pointed out to the Examiner. These features provide advantages over the prior art and dispense with prior art problems such as those described above

with reference to the Applicant's specification.

It is respectfully asserted that independent Claims 1 and 16 are each patentably distinct and non-obvious over the cited references in their own right. For example, the below-identified limitations of independent Claims 1 and 16 are not shown in any of the cited references, either taken singly or in any combination. Moreover, these Claims are distinct from each other in that they are directed to different implementations and/or include different limitations. For example, while Claim 1 is directed to a method, Claim 16 is directed to an apparatus. Moreover, each of these claims includes different limitations with respect to each other. Accordingly, each of independent Claims 1 and 16 represent separate features/implementations of the invention that are separately novel and non-obvious with respect to the prior art and to the other claims. As such, independent Claims 1 and 16 are separately patentable and are each presented for review in this appeal. Moreover, dependent Claims 24, 30, and 32 are further argued separately.

B. Whether Claims 1 and 16 Satisfy 35 U.S.C. §112, First Paragraph

As set forth in MPEP 2163.02:

The courts have described the essential question to be addressed in a description requirement issue in a variety of ways. An objective standard for determining compliance with the written description requirement is, "does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed." *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant must convey with reasonable clarity to those

skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)).

The Examiner rejected Claims 1 and 16 as failing to comply with the written description requirement. The Examiner contends that "[t]he specification does not contain subject matter describing the limitation of 'comparing ... a particular one compatibility parameter of said ALG file with both a compatibility feature of said bi-directional communication device and a non-signature, non-code-error checking feature expected in received and authentic ALG files'.

Hereinafter, it will be shown that Claims 1 and 16 do, in fact, comply with the written description requirement and, hence, satisfy 35 U.S.C. 112, first paragraph.

B1. Claims 1 and 16

Per the limitations of Claims 1 and 16, the same particular one compatibility parameter is compared to both a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device.

Initially, prior to reproducing the arguments submitted in the Appeal Brief, the Applicants will address the Examiner's comments in the Examiner's Answer.

First, the Examiner is mischaracterizing the Applicants' argument when stating the following on page 10 of the Examiner's Answer:

The Appellant cites a portion of the specification which states that the "ALG header size field 216 AND ALG body size field 224 in the header 210 of the received ALG file 200 are checked" (emphasis added by Applicants). The Appellant then asserts that this passage "clearly discloses the separate use of either header size of body size, as well as the joint use of both, in respective comparisons" [See Appeal Brief Pgs 15-16].

That is, the Applicants did NOT simply base the preceding last sentence on solely the sentence before it. Rather, the entire first part of that argument in the Appeal Brief has been failed to be addressed or acknowledged by the Examiner, namely how both header size and body size are SEPARATELY DESCRIBED in other places in the specification (e.g., namely previously cited page 10, lines 23-38, page 11, lines 4-5, and page 11, lines 13-14). For example, as noted in the first part of that argument, there is a space between the file header size and the file body size when each are respectively described in the specification, and other parameters are listed/described in that space. The separate description of the same, coupled with additional teachings that some (Applicants' specification, p. 10, lines 15-19) or all (Applicants' specification, p. 10, lines 27-28) of the listed parameters may be used, clearly discloses the use of one or both of the file header size and the file body size.

Moreover, given the teachings of the present principles provided in the instant application, one of ordinary skill in this and related arts, when contemplating the same, would realize that any one of the file body size and the file header size can be used by itself as a quick check of whether

the overall ALG file size exceeds the memory capacity since if any one of the file header size or the file body size is greater than the memory capacity then clearly both will exceed that same memory capacity. Hence, the treating of the file header size and the file body size as separate parameters in the cited portions of the disclosure (e.g., Applicants' specification, p. 10, lines 23-28, p. 11, lines 4-5, and p. 11, lines 13-14).

Moreover, while the Examiner has further stated on page 11 of the Examiner's Answer that "Nothing within the specification described the 'separate use of either header size or body size' as asserted by the Applicant", the Applicants again point the Examiner to page 10, lines 10-19:

The ALG header 210 comprises header data fields such as header format version 216, header size 218, expected header CRC 220, payload authentication signature 222, payload size 224, expected payload CRC 226, compatible hardware and software version families 228 and 230, and other header data 212 such as compression parameters, copyright notices, and/or the date/time the payload was created, among other information. In one embodiment of the invention, many of these ALG header 210 components may be utilized as ALG file validity fields 214, which are used by the cable modem 130 to determine whether an upgraded or new ALG file 200 received by the cable modem 130 has been corrupted during file transfer, as well as compatible with the cable modem hardware and software.

Further, the Examiner's position is INCONSISTENT. For example, on page 11, lines 4-6 of the Examiner's Answer, the Examiner states that "[t]he comparison steps described in the specification merely states that the ALG size is determined from the header [Fig. 3, item 310; Pg. 13, lines 4-9]". However, when citing the exact same portion of the Applicants' specification, the Examiner then states at page 11, lines 7-10 of the Examiner's Answer that "[t]he ALG header and

ALG body sizes are used together as a single 'compatibility parameter' compared with a compatibility feature of the bi-directional device [See Fig. 3, item 310, 312; Pg. 13, lines 4-9]".

While the Examiner is clearly inconsistent in his argument relating to the exact same portion of the Applicants' disclosure, it is clear that the latter statement (regarding the ALG header and ALG body size being used together as a single compatibility parameter) is erroneous since file header size and file body size are described separately with spaces between their description and other parameters described therein between. Additionally, with respect to the same figure cited by the Examiner and argued inconsistently by the Examiner, the Applicants' specification discloses the following: "Method 300 comprises checking various parameters for compatibility issues and loss of data during file transfer. It is noted that the types of parameters and the specific order shown in FIG. 3 for validating the various parameters are merely illustrative, and should not be construed as being so limiting."

Moreover, the Examiner states that "[t]he Appellant states a larger header or body size may indicate the presence of a virus, yet the cited passage mentions nothing regarding the size of the header or body size field indicating the presence of a virus [See Appeal Brief, pg. 18, citing Specification Pg. 10, lines 9-11, 16-18]". However, the cited portion does in fact disclose a list of parameters that includes both the file header size and the file body size and continues to disclose that many of the header components may be utilized as file validity fields to determine whether a file has been corrupted. A file header size is clearly a header component and the inclusion of extra code in a header such as a virus would clearly increase the size of the header and thus would be ascertainable when compared to an expected size(s) that should be received (i.e., without a virus and corresponding virus code included therein). Hence, CRC fields by themselves are not only way

to ascertain the existence of corruption, as is readily known to those of ordinary skill in this and related arts.

Further, Applicants do not even need to rely upon any inherency argument given the explicit disclosures in the instant application as cited above and below in support of the Applicants' position.

In view of at least the preceding arguments, and the arguments as originally set forth in the Appeal Brief and reproduced herein below, it is respectfully asserted that the use of either one of the file header size and file body size, or both, are disclosed and supported by the Applicants' specification in accordance with 35 U.S.C. 112, first paragraph.

The previous arguments from the Appeal Brief will now be reproduced for completeness.

While significantly more detailed arguments follow, to put it all the more succinctly while showing where this is going, we respectfully note the following:

Page 11, lines 4-5 of the Applicants' specification describe the header size field.

Page 11, lines 13-14 of the Applicants' specification describe the body size field.

In between these descriptions of the header size field and the body size field, other parameters are described including the header expected CRC field and authentication signature field described.

Hence, there is a space between the file header size and file body size when each are respectively described in the specification.

Also, in an exemplary listing of possible parameters on page 10, lines 23-28, other parameters (namely a header expected CRC and an authentication signature) are listed in between the listing of header size and body size.

Thus, up to this point, they are described separately (and not jointly).

Thereafter, with respect to FIG. 3, step 312 discloses the use of both file header size and file body size (clearly as a sum, although such word is not explicitly used, but instead the terms “ALG file 200 exceeds the capacity of the non-volatile memory 136” (where clearly the ALG file comprises the header and body, as explicitly disclosed at page 10, lines 1-2 of the Applicants’ specification). That is, step 312 is disclosed at page 13, lines 4-9 as follows (emphasis added):

At step 310, the ALG header size field 216 AND ALG body size field 224 in the header 210 of the received ALG file 200 are checked. If at step 312, the ALG file 200 exceeds the capacity of the non-volatile memory 136, then method 300 proceeds to step 350, where the ALG file 200 is rejected as discussed above. If at step 312, the ALG file 200 does not exceed the capacity of the non-volatile memory 136, then method 300 proceeds to step 314.

Hence, the disclosure clearly discloses the separate use of either header size or body size, as well as the joint use (a sum) of both, in respective comparisons.

Thus, the claims in issue are clearly supported by the Applicants’ disclosure.

The more detailed arguments will now follow.

Initially, the Applicants respectfully reproduce the following portion of MPEP §2163:

“While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure.”

Support for the preceding limitation of Claims 1 and 16 identified by the Examiner may be found at least at page 9, lines 9-11 and 16-18; page 10, lines 10-28; page 11, lines 3-4 and lines 13-14; page 12, lines 6-9; and page 13, lines 4-9 of the Applicants’ specification. In particular, page 10, lines 10-19 of the Applicants’ specification disclose the following (emphasis added):

The ALG header 210 comprises header data fields such as header format version 216, **header size 218**, expected header CRC 220, payload authentication signature 222, **payload size 224**, expected payload CRC 226, compatible hardware and software version families 228 and 230, and other header data 212 such as compression parameters, copyright notices, and/or the date/time the payload was created, among other information. **In one embodiment of the invention, many of these ALG header 210 components may be utilized as ALG file validity fields 214**, which are used by the cable modem 130 to determine whether an upgraded or new ALG file 200 received by the cable modem 130 has been corrupted during file transfer, as well as compatible with the cable modem hardware and software.

Thus, with respect to comparing the particular one compatibility parameter of said ALG file, at least the following approaches are at least one of expressly, implicitly, or inherently disclosed in the Applicants’ specification. As an example, the particular one compatibility parameter of said ALG file may be considered to be the header size or body size of the ALG file. In such a case, the header or body size field of said ALG file is compared with the available memory size (where the available memory size is a compatibility feature of said bi-

directional communications device) and also the header or body size field of said ALG file is compared with the feature of a received and authentic ALG file having a header or body size field(s) (and/or values therein) IN THE FIRST PLACE (as a header size field and body size field (and associated values) are expected in received and authentic ALG files, and their very absence is a likely indication of packet corruption).

Thus, with respect to the first comparison described above (between the particular one compatibility parameter of said ALG file and a compatibility feature of said bi-directional communications device), the header and/or body size field may be compared directly to the compatibility feature of said bi-directional communications device (e.g., an amount of available memory in said bidirectional communications device), since if either one does not fit in available memory, then certainly the entire ALG file will not fit in available memory.

With respect to the second comparison described above (between the particular one compatibility parameter of said ALG file and the non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device), the header or body size field may, in ONE IMPLEMENTATION, be compared to the non-signature, non-code-error checking feature of an ALG file having such a field(s) (or value(s) for that field(s)) in the first place as would be expected in received and authentic ALG files by said bi-directional communications device (since, as noted above, an absence of such a field(s) is a strong indicator of data corruption). Further, in ANOTHER IMPLEMENTATION, the header or body size field may be compared to the non-signature, non-code-error checking feature of an ALG file having a header or body size field with a particular value or within a range of values to determine whether the specified size, for example, exceeds size thresholds for expected ALG files that are received by said

bi-directional communications device and that are authentic. As an example, a larger sized body or larger sized header may indicate the presence of a virus such as a Trojan horse or a worm (see, e.g., Applicants' specification, p. 10, lines 9-11, disclosing "[t]he rules reflect policy considerations by an organization to provide security by prohibiting unwanted data from entering the organizations local area network/wide area network (LAN/WLAN)."; and page 10, lines 16-18, disclosing "[a]dditional rules include restricting data packets that may be deemed harmful to the LAN and end-users, such as worms, as well as unauthorized persons (i.e., 'hackers') trying to infiltrate the LAN") (emphasis added). The above implementations are clearly disclosed, either expressly, implicitly, or inherently as required under MPEP §2163. This would seem particularly so in view of the Examiner's statement relating to the state of the art at the time of Applicants' invention, as set forth on page 5 of the Office Action dated January 8, 2009, where the Examiner stated (NO emphasis added by Applicants):

Smith discloses of a method and system for providing protection from exploits to devices connected to a network by comparing the received file with a non-signature, non-code-error checking feature expected in received and authentic files [Para. 0065 and 0066; the size of the header or body of the file is examined to determine if they are longer than they should be]. It would have been obvious to one skilled in the art at the time of the invention to verify the header or body length of a particular message to ensure that there is no executable code within the overflow buffers allotted for portions or all of a header or body of a file [Para. 0026]. This allows the system to prevent improper access to data or unauthorized programs executed on the host computer [Para. 0026].

Given the Examiner's preceding statement from page 5 of the pending Office Action relating to Smith, coupled at least with the Applicants' disclosure and the following text from MPEP 2163, it would seem that the Examiner would agree with the Applicants' arguments as set forth above regarding the limitation in issue being supported by the Applicants' disclosure in compliance with 35 U.S.C. 112, first paragraph:

Generally, there is an inverse correlation between the level of skill and knowledge in the art and the specificity of disclosure necessary to satisfy the written description requirement. Information which is well known in the art need not be described in detail in the specification. See, e.g., *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379-80, 231 USPQ 81, 90 (Fed. Cir. 1986).

It is to be noted that the Examiner has seemed to premise at least a portion of his argument on the following reasoning as set forth in the Response to Arguments section of the pending Office Action dated June 10, 2009 (emphasis added):

The disclosure of the present application does not even suggest that the header or body size is compared to determine if there is anything unusual with the file itself. The present application discloses of comparing the header and/or body size of the incoming file only to determine if the ALG file fits within the non-volatile memory of the bi-directional device [See Fig. 3, item 312; Para. 0051 of present application]. **There is no evidence or suggestion within the specification of comparing the header and/or body size of the incoming file to determine if a virus is present within the file.** The disclosure merely suggests that the size comparison is made to determine if the file fits within the non-

volatile memory of the bi-directional device. There is nothing to suggest the inherency of any features of the Smith reference.

To refute the Examiner's position, the following explicit disclosure is provided from the page 10, lines 9-11 and 16-18 (emphasis added):

The rules reflect policy considerations by an organization to provide security by prohibiting unwanted data from entering the organizations local area network/wide area network (LAN/WLAN). ... Additional rules include restricting data packets that may be deemed harmful to the LAN and end-users, such as worms, as well as unauthorized persons (i.e., 'hackers') trying to infiltrate the LAN.

Hence, it is clear that the Applicants' specification does, in fact, contemplate and explicitly disclose the prohibiting of unwanted data from entering the LAN/WLAN such as worms (e.g., viruses), contrary to the Examiner's position and reading of the Applicants' specification.

Accordingly, in view of the preceding, it is respectfully asserted that Claims 1 and 16 satisfy 35 U.S.C. 112, first paragraph. Therefore, withdrawal of the rejection and allowance of Claims 1 and 16 is earnestly requested.

C. Whether Claim 32 Satisfies 35 U.S.C. §112, First Paragraph

As set forth in MPEP 2163.02:

The courts have described the essential question to be addressed in a description requirement issue in a variety of ways. An objective standard for determining compliance with the written description requirement is, "does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed." *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)).

The Examiner rejected Claim 32 as failing to comply with the written description requirement. The Examiner contends that "wherein the particular one compatibility parameter is both capable of being directly compared and indirectly compared to the compatibility feature of said bi-directional communications device, wherein an indirect comparison involves the particular one compatibility parameter being included in a sum, and wherein the sum is capable of being directly compared to the compatibility feature of said bi-directional communications device."

Hereinafter, it will be shown that Claim 32 does, in fact, comply with the written description requirement and, hence, satisfy 35 U.S.C. 112, first paragraph.

C1. Claim 32

Per the limitation of Claim 32, the particular one compatibility parameter is both capable of being directly compared and indirectly compared to the compatibility feature of said bi-directional communications device, wherein an indirect comparison involves the particular one compatibility parameter being included in a sum, and wherein the sum is capable of being directly compared to the compatibility feature of said bi-directional communications device.

Initially, prior to reproducing the arguments submitted in the Appeal Brief, the Applicants will address the Examiner's comments in the Examiner's Answer.

First, the Examiner is mischaracterizing the Applicants' argument when stating the following on page 10 of the Examiner's Answer (see also, Examiner's Answer, p. 13, line 21-22 and p. 14, lines 5-6):

The Appellant cites a portion of the specification which states that the "ALG header size field 216 AND ALG body size field 224 in the header 210 of the received ALG file 200 are checked" (emphasis added by Applicants). The Appellant then asserts that this passage "clearly discloses the separate use of either header size of body size, as well as the joint use of both, in respective comparisons" [See Appeal Brief Pgs 15-16].

That is, the Applicants did NOT simply base the preceding last sentence on solely the sentence before it. Rather, the entire first part of that argument in the Appeal Brief has been failed to be addressed or acknowledged by the Examiner, namely how both header size and body size are SEPARATELY DESCRIBED in other places in the specification (e.g., namely previously cited

page 10, lines 23-38, page 11, lines 4-5, and page 11, lines 13-14). For example, as noted in the first part of that argument, there is a space between the file header size and the file body size when each are respectively described in the specification, and other parameters are listed/described in that space. The separate description of the same, coupled with additional teachings that some (Applicants' specification, p. 10, lines 15-19) or all (Applicants' specification, p. 10, lines 27-28) of the listed parameters may be used, clearly discloses the use of one or both of the file header size and the file body size.

Moreover, given the teachings of the present principles provided in the instant application, one of ordinary skill in this and related arts, when contemplating the same, would realize that any one of the file body size and the file header size can be used by itself as a quick check of whether the overall ALG file size exceeds the memory capacity since if any one of the file header size or the file body size is greater than the memory capacity then clearly both will exceed that same memory capacity. Hence, the treating of the file header size and the file body size as separate parameters in the cited portions of the disclosure (e.g., Applicants' specification, p. 10, lines 23-28, p. 11, lines 4-5, and p. 11, lines 13-14).

Moreover, while the Examiner has further stated on page 11 of the Examiner's Answer (see also, Examiner's Answer, p. 13, line 21-22 and p. 14, lines 5-6) that "Nothing within the specification described the 'separate use of either header size or body size' as asserted by the Applicant", the Applicants again point the Examiner to page 10, lines 10-19:

The ALG header 210 comprises header data fields such as header format version 216, header size 218, expected header CRC 220, payload authentication signature 222, payload size 224, expected payload CRC 226, compatible hardware

and software version families 228 and 230, and other header data 212 such as compression parameters, copyright notices, and/or the date/time the payload was created, among other information. In one embodiment of the invention, many of these ALG header 210 components may be utilized as ALG file validity fields 214, which are used by the cable modem 130 to determine whether an upgraded or new ALG file 200 received by the cable modem 130 has been corrupted during file transfer, as well as compatible with the cable modem hardware and software.

Further, the Examiner's position is INCONSISTENT. For example, on page 11, lines 4-6 of the Examiner's Answer, the Examiner states that "[t]he comparison steps described in the specification merely states that the ALG size is determined from the header [Fig. 3, item 310; Pg. 13, lines 4-9]". However, when citing the exact same portion of the Applicants' specification, the Examiner then states at page 11, lines 7-10 of the Examiner's Answer that "[t]he ALG header and ALG body sizes are used together as a single 'compatibility parameter' compared with a compatibility feature of the bi-directional device [See Fig. 3, item 310, 312; Pg. 13, lines 4-9]".

While the Examiner is clearly inconsistent in his argument relating to the exact same portion of the Applicants' disclosure, it is clear that the latter statement (regarding the ALG header and ALG body size being used together as a single compatibility parameter) is erroneous since file header size and file body size are described separately with spaces between their description and other parameters described therein between. Additionally, with respect to the same figure cited by the Examiner and argued inconsistently by the Examiner, the Applicants' specification discloses the following: "Method 300 comprises checking various parameters for compatibility issues and loss of data during file transfer. It is noted that the types of parameters and the specific order shown in

FIG. 3 for validating the various parameters are merely illustrative, and should not be construed as being so limiting.”

Moreover, the Examiner states that “[t]he Appellant states a larger header or body size may indicate the presence of a virus, yet the cited passage mentions nothing regarding the size of the header or body size field indicating the presence of a virus [See Appeal Brief, pg. 18, citing Specification Pg. 10, lines 9-11, 16-18]”. However, the cited portion does in fact disclose a list of parameters that includes both the file header size and the file body size and continues to disclose that many of the header components may be utilized as file validity fields to determine whether a file has been corrupted. A file header size is clearly a header component and the inclusion of extra code in a header such as a virus would clearly increase the size of the header and thus would be ascertainable when compared to an expected size(s) that should be received (i.e., without a virus and corresponding virus code included therein). Hence, CRC fields by themselves are not only way to ascertain the existence of corruption, as is readily known to those of ordinary skill in this and related arts.

Further, Applicants do not even need to rely upon any inherency argument given the explicit disclosures in the instant application as cited above and below in support of the Applicants’ position.

In view of at least the preceding arguments, and the arguments as originally set forth in the Appeal Brief and reproduced herein below, it is respectfully asserted that the use of either one of the file header size and file body size, or both, are disclosed and supported by the Applicants’ specification in accordance with 35 U.S.C. 112, first paragraph.

The previous arguments from the Appeal Brief will now be reproduced for completeness.

While significantly more detailed arguments follow, to put it all the more succinctly while showing where this is going, we respectfully note the following:

Page 11, lines 4-5 of the Applicants' specification describe the header size field.

Page 11, lines 13-14 of the Applicants' specification describe the body size field.

In between these descriptions of the header size field and the body size field, other parameters are described including the header expected CRC field and authentication signature field described.

Hence, there is a space between the file header size and file body size when each are respectively described in the specification.

Also, in an exemplary listing of possible parameters on page 10, lines 23-28, other parameters (namely a header expected CRC and an authentication signature) are listed in between the listing of header size and body size.

Thus, up to this point, they are described separately (and not jointly).

Thereafter, with respect to FIG. 3, step 312 discloses the use of both file header size and file body size (clearly as a sum, although such word is not explicitly used, but instead the terms "ALG file 200 exceeds the capacity of the non-volatile memory 136" (where clearly the ALG file comprises the header and body, as explicitly disclosed at page 10, lines 1-2 of the Applicants' specification)). That is, step 312 is disclosed at page 13, lines 4-9 as follows (emphasis added):

At step 310, the ALG header size field 216 AND ALG body size field 224 in the header 210 of the received ALG file 200 are checked. If at step 312, the ALG file 200 exceeds the capacity of the non-volatile memory 136, then

method 300 proceeds to step 350, where the ALG file 200 is rejected as discussed above. If at step 312, the ALG file 200 does not exceed the capacity of the non-volatile memory 136, then method 300 proceeds to step 314.

Hence, the disclosure clearly discloses the separate use of either header size or body size, as well as the joint use (a sum) of both, in respective comparisons.

Thus, the claims in issue are clearly supported by the Applicants' disclosure.

The more detailed arguments will now follow.

Initially, the Applicants respectfully reproduce the following portion of MPEP §2163:

"While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure."

Support for the preceding limitation of Claims 1 and 16 identified by the Examiner may be found at least at page 9, lines 9-11 and 16-18; page 10, lines 10-28; page 11, lines 3-4 and lines 13-14; page 12, lines 6-9; and page 13, lines 4-9 of the Applicants' specification. In particular, page 10, lines 10-19 of the Applicants' specification disclose the following (emphasis added):

The ALG header 210 comprises header data fields such as header format version 216, header size 218, expected header CRC 220, payload authentication signature 222, payload size 224, expected payload CRC 226, compatible hardware and software version families 228 and 230, and other header data 212 such as compression parameters, copyright notices, and/or the date/time the payload was created, among other information. In one embodiment of the invention, many of these ALG header 210 components may be utilized as ALG file validity fields 214, which are used by the cable modem 130 to determine whether an upgraded or

new ALG file 200 received by the cable modem 130 has been corrupted during file transfer, as well as compatible with the cable modem hardware and software.

Moreover, in particular, page 13, lines 4-8 of the Applicants specification disclose the following (emphasis added):

At step 310, the ALG header size field 216 and ALG body size field 224 in the header 210 of the received ALG file 200 are checked. If at step 312, the ALG file 200 exceeds the capacity of the non-volatile memory 136, then method 300 proceeds to step 350, where the ALG file 200 is rejected as discussed above. If at step 312, the ALG file 200 does not exceed the capacity of the non-volatile memory 136, then method 300 proceeds to step 314.

Hence, while the Examiner has stated in the Response to Arguments section of the Office Action dated June 20, 2009 that “[t]he specification states that the ALG size (header or body size) is compared only once [FIG. 3, step 312] to determine if the ALG file fits within the non-volatile memory of the device (compatibility feature of the bi-directional device) [Fig. 3; Para. 0051]”, it is clear that the Examiner has misread the Applicants’ specification with respect to step 312, as both the header AND body size are compared in total to the memory capacity of the non-volatile memory 136 in *exemplary* step 312.

Moreover, page 12, lines 6-9 of the Applicants specification further disclose the following:

Method 300 comprises checking various parameters for compatibility issues and loss of data during file transfer. It is noted that the types of parameters and the specific order shown in FIG. 3 for validating the various parameters are

merely illustrative, and should not be construed as being so limiting.

Hence, the particular one compatibility parameter of said ALG file may be considered to be the header size or body size of the ALG file, or both. Given that the Applicants explicitly disclose that many of the above mentioned parameters may be used as validity fields, it is clear that one or more of the header size or body size may be used. For example, in one implementation, the body size can simply be checked against the available memory as an efficient (i.e., without performing a summing operation) check as to whether the ALG file will fit into available memory. A more comprehensive check may sum both the body size and the header size and check the sum against the available memory. Such capabilities and alternatives are clearly supported by the various cited portions of the Applicants' specification, particularly, when evaluated by one of ordinary skill in the art at the time of filing.

Accordingly, in view of the preceding, it is respectfully asserted that Claim 32 satisfies 35 U.S.C. 112, first paragraph. Therefore, withdrawal of the rejection and allowance of Claims 32 is earnestly requested.

D. Whether Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 are Unpatentable Under 35 U.S.C. §103(a) With Respect to U.S. Patent No. 6,986,133 to O'Brien et al., in View of U.S. Patent Application No. 2002/0152399 to Smith

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art" (MPEP §2143.03, citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). "If an independent claim is nonobvious under 35 U.S.C. 103,

then any claim depending therefrom is nonobvious” (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

The Examiner rejected Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 as being unpatentable over 6,986,133 to O’Brien et al. (hereinafter “O’Brien”) in view of U.S. Patent Application No. 2002/0152399 to Smith (hereinafter “Smith”). The Examiner contends that the cited combination shows all the limitations recited in Claims 1, 2, 4, 12, 14, 16, 17, and 21-31.

O’Brien is directed to a “system and method for securely upgrading networked devices” (O’Brien, Title). In further detail, O’Brien discloses the following in his Abstract:

A system (FIG. 1) for upgrading deployed networked devices (4,6,8,10,12,14,16). The devices are enabled with an installed agent (FIG. 2 left) that can identify and communicate with a server (22) running the upgrade program. When the appropriate conditions are met the server downloads the upgrade to the agent that then installs the upgrade onto the deployed device. The device is made capable of polling the server to see if an upgrade is available, or, in the alternative, the server can locate the device, query the state of the device and, when the appropriate predetermined conditions are met, download the upgrade to the device.

Smith is directed to a “system and method for providing exploit protection for networks” (O’Brien, Title). In further detail, Smith discloses the following in his Abstract:

A method and system for providing protection from exploits to devices connected to a network. The system and method include a component for determining whether an encapsulation has been applied to an attachment and

unencapsulating such encapsulated attachments, a component that performs at least one decompression of the attachment when the attachment is compressed, a component that determines whether a header, body, and/or attachment of a message includes an exploit, and a component that holds and optionally cleans messages that include exploits. A device that receives messages that are directed to the network employs the components above to provide exploit protection for at least one of the messages.

It will be shown herein below that the limitations of Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 reproduced herein are not shown in the cited combination, and that Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 should be allowed.

D1. Claims 1, 2, 4, 12, 14, 16, 17, and 21-31

Initially, it is respectfully pointed out to the Examiner that Claims 2, 4, 12, 14, and 21-25 directly or indirectly depend from independent Claim 1, and Claims 17 and 26-31 directly or indirectly depend from independent Claim 16. Thus, Claims 2, 4, 12, 14, and 21-25 include all the limitations of Claim 1, and Claims 17 and 26-31 include all the limitations of Claim 16.

It is respectfully asserted that that none of the cited references, either taken singly or in combination, teach or suggest the following step of/means for recited in Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 (with the following applicable to Claims 2, 4, 12, 14, and 21-25 by virtue of their respective dependencies from Claim 1, and with the following applicable to Claims 17 and 26-31 by virtue of their respective dependencies from Claim 16):

comparing, at the bi-directional communications device, a particular one

compatibility parameter of said ALG file with both a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device

Initially, prior to reproducing the arguments submitted in the Appeal Brief, the Applicants will address the Examiner's comments in the **Examiner's Answer**.

First, the Applicants note that the Examiner has relied upon an alleged teaching in O'Brien that an upgrade policy includes a digital signature that is compared by the upgrade agent to authenticate and verify the upgrade file regarding the recited comparing of the particular one compatibility parameter of said ALG file with a compatibility feature of said bi-directional communications device and has further relied upon an alleged teaching in Smith that the size of the header or body of the file is examined to determine if it longer than it should be regarding the recited comparing of the (SAME) particular one compatibility parameter of said ALG file with a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device. However, if the same particular one compatibility parameter is being compared to both a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature, the Examiner's proposed combination does not make sense and seems to contravene (teach away from) the specific claim limitations, since the claims explicitly recite "a non-signature, non-code-error checking feature" (emphasis added). That is, what would be the purpose or motivation for such an odd and apparently useless combination as proposed by the Examiner where a digital signature (as disclosed by O'Brien) is compared to a "non-signature, non-code-error checking feature". Thus, not only is any motivation

to combine as proposed by the Examiner lacking, but the proposed combination is contrary to the explicit claim limitations and further makes no sense. This is more fully argued in greater detail herein below in the originally provided arguments of the Appeal Brief and also in the further argument below directed to the Examiner's Answer.

The Examiner's new argument in the Examiner's Answer that "the term 'compatibility parameter' can be defined to include multiple elements which are all subparts of one 'compatibility parameter'" (see, e.g., Examiner's Answer, p. 15, lines 4-6) is misplaced and nonetheless fails to address the deficiency of the cited combination proposed by the Examiner where there is no usefulness or rationale for comparing a digital signature as disclosed by O'Brien against a non-signature, non-code-error checking feature as recited in the claims. For example, comparisons usually involve related items (e.g., apples to apples and NOT apples to oranges) and if one item is a digital signature and one is not, as proposed by the Examiner, then the rationale for performing such a comparison is completely lacking of purpose or rationale, and clearly does not correspond to the limitations recited in the pending claims. Given the preceding, the Examiner's statement on page 17 of the Examiner's Answer that "O'Brien alone is sufficient to disclose the limitations of Claims 1 and 16" seems erroneous and certainly does not cover the actual limitations recited in the pending claims but rather seems to teach away from the same.

With respect to Claims 4, 23, and 27, the Examiner has stated on page 17 of the Examiner's Answer that the "particular one compatibility parameter" is defined as "comprises one of a header size of said ALG file and a body size of said ALG file". The Examiner then continued that "[t]he transitional term 'comprising' is inclusive or open-ended and does not exclude additional, unrecited elements or method steps" (see, e.g., Examiner's Answer, p. 17, lines 1-4). However, while the

Examiner immediately there before cited a plurality of alleged parameters disclosed in the cited references, none made any sense in the proposed combinations asserted by the Examiner (i.e., none seemed to be items that would rationally be compared to each other and where such a comparison would prove useful, such as the above mentioned seemingly un-useful comparison proposed by the Examiner involving comparing a digital signature as per O'Brien with a non-signature, non-code-error checking feature as recited in the pending claims), since as noted more fully herein below, the pending claims essentially require a comparison of 1 item (particular one compatibility parameter of said ALG file) with item 2 (a compatibility feature of said bi-directional communications device) AND with item 3 (a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device).

With respect to Claims 24 and 30, the Examiner's inconsistent use of the cited references is improper, unfair and still does not anticipate or render obvious the pending claim limitations as argued more fully herein below. Moreover, despite the Examiner's allegation to the contrary, using a digital signature from O'Brien to reject, for example, Claims 1 and 16, while later using a checksum from O'Brien to reject Claims 24 and 30, where the digital signature and the checksum are used interchangeably for the same claim element is an inconsistent use. Moreover, the proposed combination involving the checksum also fails to prove useful in the required comparing necessary per the recited claim limitations (i.e., item 1 compared to both item 2 and item 3) and hence, lacks a motivation to combine.

Hence, the Examiner's further arguments in the Examiner's Answer still do not show that the pending claim limitations are anticipated or rendered obvious by the cited references.

The previous arguments from the Appeal Brief will now be reproduced for completeness.

It is to be further noted that Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 require by their respective explicit limitations that the particular one compatibility parameter of said ALG file (hereinafter interchangeably referred to as “item 1” for the sake of illustration) is compared with both a compatibility feature of said bi-directional communications device (hereinafter interchangeably referred to as “item 2” for the sake of illustration) and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device (hereinafter interchangeably referred to as “item 3” for the sake of illustration). Thus, per Claims 1, 2, 4, 12, 14, 16, 17, and 21-31, item 1 is compared with both item 2 and item 3. That is, the same item 1 is compared to both item 2 and item 3.

In contrast, in setting forth the rejection, the Examiner has set forth the following reasoning with respect to items 1 and 2 (first comparison) above, relying upon O’Brien: “upgrade policy includes a digital signature that is compared by the upgrade agent to authenticate and verify the upgrade file” (Office Action, p. 10).

However, in further setting forth the rejection, the Examiner has set forth the following reasoning with respect to items 1 and 3 (second comparison) above, relying upon Smith: “Para. 0065 and 0066; the size of the header or body of the file is examined to determine if they are longer than they should be” (Office Action, p. 11).

Thus, according to the Examiner’s rejection, a comparison of digital signatures per O’Brien and a comparison of header (or file body) sizes per Smith cover all the above reproduced comparing recited in the pending claims. However, as per the explicit claim limitations, if the SAME particular one compatibility parameter is compared to BOTH a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature

expected in received and authentic ALG files by said bi-directional communications device, THEN THE EXAMINER'S PROPOSED COMBINATION IS CLEARLY DEFICIENT ON ITS FACE SINCE THE CLAIM EXPLICITLY EXCLUDES SIGNATURES FROM ITEM 3, AND SINCE ITEM 3 IS COMPARED TO ITEM 1, ITEM 1 CAN NEVER BE A SIGNATURE. That is, since item 1 (a particular one compatibility parameter of said ALG file) is compared to both item 2 (compatibility feature of said bi-directional communications device) and item 3 (a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device), then item 1 can never relate to a signature since that would mean that item 3 is a signature (in order to compare apples to apples, and not apples to oranges) which is explicitly prohibited (a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device) by the claim language.

Hence, initially the Examiner cited a digital signature from O'Brien as corresponding to the particular one compatibility parameter of said ALG file, and then cited a header or file body size as corresponding to the particular one compatibility parameter of said ALG file. Clearly, while the above reproduced claim limitations call for the SAME particular ONE compatibility parameter of said ALG file (to be compared to BOTH a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device), the Examiner's rejection uses a digital signature and a (header or file body) size as corresponding to the particular ONE compatibility parameter of said ALG file which clearly is incorrect.

Moreover, while the claims recite, *inter alia*, “comparing, at the bi-directional communications device, a particular one compatibility parameter of said ALG file with both a compatibility feature of said bi-directional communications device...”, the Examiner has equated a digital signature comparison in O’Brien to the same. However, it is respectfully pointed out to the Examiner that a signature (as disclosed by O’Brien) relates to a file itself and has nothing to do with a compatibility feature of the bi-directional communications device.

Hence, it is clear from the onset that the Examiner has failed to set forth a prima facie rejection of the claims under 35 U.S.C. 103(a), as the Examiner has failed to show each and every element recited in the claims.

Hence, the cited combination fails to teach or suggest the above recited limitations of Claims 1, 2, 4, 12, 14, 16, 17, and 21-31.

Accordingly, Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 are patentably distinct and non-obvious over the cited combination for at least the reasons set forth above. Therefore, withdrawal of the rejection and allowance of Claims 1, 2, 4, 12, 14, 16, 17, and 21-31 is earnestly requested.

D2. Claims 24 and 30

It is respectfully asserted that that none of the cited references, either taken singly or in combination, teach or suggest the following limitations recited in Claims 24 and 30:

wherein a value of the particular one compatibility parameter of said ALG file is added to a value of another particular one compatibility parameter of said

ALG file as a sum that is compared to a value of the compatibility feature of said bi-directional communications device.

Initially, prior to reproducing the arguments submitted in the Appeal Brief, the Applicants will address the Examiner's comments in the Examiner's Answer.

With respect to Claims 24 and 30, the Examiner's inconsistent use of the cited references is improper, unfair and still does not anticipate or render obvious the pending claim limitations as argued more fully herein below. Moreover, despite the Examiner's allegation to the contrary, using a digital signature from O'Brien to reject, for example, Claims 1 and 16, while later using a checksum from O'Brien to reject Claims 24 and 30, where the digital signature and the checksum are used interchangeably for the same claim element is an inconsistent use. Moreover, the proposed combination involving the checksum also fails to prove useful in the required comparing necessary per the recited claim limitations (i.e., item 1 compared to both item 2 and item 3) and hence, lacks a motivation to combine.

Hence, the Examiner's further arguments in the Examiner's Answer still do not show that the pending claim limitations are anticipated or rendered obvious by the cited references.

The previous arguments from the Appeal Brief will now be reproduced for completeness.

For example, the Examiner has cited column 7, lines 15-18 of O'Brien, while providing the following reasoning on page 7 of the Office Action dated January 8, 2009 and pages 12-13 of the Office Action dated June 10, 2009: "the upgrade agent performs a comparison for each chunk of the upgrade with the appropriate checksum to determine if the file is corrupt". First, the Examiner's use of these references is completely INCONSISTENT and quite unfair in that the Examiner's is equating a plurality of different elements to the same element that is recited in multiple claims. For

example, with respect to Claims 1 and 16 (from which Claims 24 and 30 respectively depend), the Examiner equated a signature comparison disclosed in O'Brien with recited item 1 (i.e., "particular one compatibility parameter of said ALG file") and item 2 (i.e., "compatibility feature of said bi-directional communications device"), and the header or body length of a particular message disclosed in Smith to recited item 1 and item 3 (i.e., "non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device"). However, in rejecting Claims 24 and 30 on page 7 of the Office Action dated January 8, 2009, the cited reasoning of the "upgrade agent performs a comparison for each chunk of the upgrade with the appropriate checksum to determine if the file is corrupt" relates to none of the previously correlated items, namely the signature comparison disclosed in O'Brien, nor the header or body length of a particular message disclosed in Smith. Further, item 3 as explicitly recited in the claims is "non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device" (emphasis added). Hence, the citation of "an appropriate checksum" from Smith by the Examiner is explicitly prohibited by the recited claim language and, hence, can never correspond to the same, thus showing that the Examiner has clearly failed to set forth a prima facie rejection as required under 35 U.S.C. 103(a). Moreover, Claims 24 and 30 recite that a value of the particular one compatibility parameter of said ALG file is added to a value of another particular one compatibility parameter of said ALG file as a sum that is compared to a value of the compatibility feature of said bi-directional communications device. For example, in the Examiner's reasoning, the Examiner has provided no correlation to the compatibility feature of said bi-directional communications device.

Hence, the cited combination fails to teach or suggest the above recited limitations of Claims 24 and 30.

Accordingly, Claims 24 and 30 are patentably distinct and non-obvious over the cited combination for at least the reasons set forth above. Therefore, withdrawal of the rejection and allowance of Claims 24 and 30 is earnestly requested.

E. Whether Claims 11 and 18 are Unpatentable Under 35 U.S.C. §103(a) With Respect to U.S. Patent No. 6,986,133 to O'Brien et al., in View of U.S. Patent Application No. 2002/0152399 to Smith, and Further in View of U.S. Patent No. 6,665,752 to Bernath

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art" (MPEP §2143.03, citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). "If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious" (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

The Examiner rejected Claims 11 and 18 as being unpatentable over 6,986,133 to O'Brien et al. (hereinafter "O'Brien") in view of U.S. Patent Application No. 2002/0152399 to Smith (hereinafter "Smith") and further in view of U.S. Patent No. 6,666,752 to Bernath (hereinafter "Bernath"). The Examiner contends that the cited combination shows all the limitations recited in Claims 11 and 18.

O'Brien is directed to a "system and method for securely upgrading networked devices" (O'Brien, Title). In further detail, O'Brien discloses the following in his Abstract:

A system (FIG. 1) for upgrading deployed networked devices (4,6,8,10,12,14,16). The devices are enabled with an installed agent (FIG. 2 left) that can identify and communicate with a server (22) running the upgrade program. When the appropriate conditions are met the server downloads the upgrade to the agent that then installs the upgrade onto the deployed device. The device is made capable of polling the server to see if an upgrade is available, or, in the alternative, the server can locate the device, query the state of the device and, when the appropriate predetermined conditions are met, download the upgrade to the device.

Smith is directed to a “system and method for providing exploit protection for networks” (O’Brien, Title). In further detail, Smith discloses the following in his Abstract:

A method and system for providing protection from exploits to devices connected to a network. The system and method include a component for determining whether an encapsulation has been applied to an attachment and unencapsulating such encapsulated attachments, a component that performs at least one decompression of the attachment when the attachment is compressed, a component that determines whether a header, body, and/or attachment of a message includes an exploit, and a component that holds and optionally cleans messages that include exploits. A device that receives messages that are directed to the network employs the components above to provide exploit protection for at least one of the messages.

Bernath is directed to an “interrupt driven interface coupling a programmable media access controller and a process controller” (Bernath, preamble). In further detail, Bernath discloses the following in his Abstract:

An interrupt driven interface coupling a programmable media access controller (MAC) and a process controller. The interrupt driven interface is operable within a cable modem system. The specification by which the cable modem operates to transfer data between the programmable media access controller (MAC) and the control processor is loaded into a memory location within the system, and the physical system is operable to provide for backward compatibility, in that, the addition of new messages and the deletion of old messages within the specification is performed via software upgrade. The necessity of a re-design and re-fabrication of the programmable media access controller (MAC) and the control processor, and the interface between them is completely obviated by the present invention.

It will be shown herein below that the limitations of Claims 11 and 18 reproduced herein are not shown in the cited combination, and that Claims 11 and 18 should be allowed.

E1. Claims 11 and 18

Initially, it is respectfully pointed out to the Examiner that Claims 11 and 18 directly depend from independent Claims 1 and 16, respectively. Thus, Claims 11 and 18 include all the limitations of Claims 1 and 16, respectively.

It is respectfully asserted that that none of the cited references, either taken singly or in combination, teach or suggest the following limitations recited in Claims 11 and 18 (with the following applicable to Claims 11 and 18 by virtue of their respective dependencies from Claims 1 and 16):

comparing, at the bi-directional communications device, a particular one compatibility parameter of said ALG file with both a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device

Initially, prior to reproducing the arguments submitted in the Appeal Brief, the Applicants will address the Examiner's comments in the Examiner's Answer.

First, the Applicants note that the Examiner has relied upon an alleged teaching in O'Brien that an upgrade policy includes a digital signature that is compared by the upgrade agent to authenticate and verify the upgrade file regarding the recited comparing of the particular one compatibility parameter of said ALG file with a compatibility feature of said bi-directional communications device and has further relied upon an alleged teaching in Smith that the size of the header or body of the file is examined to determine if it longer than it should be regarding the recited comparing of the (SAME) particular one compatibility parameter of said ALG file with a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device. However, if the same particular one compatibility parameter is being compared to both a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature, the Examiner's proposed combination does not make sense and seems to contravene (teach away from) the specific claim limitations, since the claims explicitly recite "a non-signature, non-code-error checking feature" (emphasis added). That is, what would be the purpose or motivation for such an odd and apparently useless combination as proposed by the Examiner where a digital signature (as disclosed by O'Brien) is

compared to a “non-signature, non-code-error checking feature”. Thus, not only is any motivation to combine as proposed by the Examiner lacking, but the proposed combination is contrary to the explicit claim limitations and further makes no sense. This is more fully argued in greater detail herein below in the originally provided arguments of the Appeal Brief and also in the further argument below directed to the Examiner’s Answer.

The Examiner’s new argument in the Examiner’s Answer that “the term ‘compatibility parameter’ can be defined to include multiple elements which are all subparts of one ‘compatibility parameter’” (see, e.g., Examiner’s Answer, p. 15, lines 4-6) is misplaced and nonetheless fails to address the deficiency of the cited combination proposed by the Examiner where there is no usefulness or rationale for comparing a digital signature as disclosed by O’Brien against a non-signature, non-code-error checking feature as recited in the claims. For example, comparisons usually involve related items (e.g., apples to apples and NOT apples to oranges) and if one item is a digital signature and one is not, as proposed by the Examiner, then the rationale for performing such a comparison is completely lacking of purpose or rationale, and clearly does not correspond to the limitations recited in the pending claims. Given the preceding, the Examiner’s statement on page 17 of the Examiner’s Answer that “O’Brien alone is sufficient to disclose the limitations of Claims 1 and 16” seems erroneous and certainly does not cover the actual limitations recited in the pending claims but rather seems to teach away from the same.

Hence, the Examiner’s further arguments in the Examiner’s Answer still do not show that the pending claim limitations are anticipated or rendered obvious by the cited references.

The previous arguments from the Appeal Brief will now be reproduced for completeness.

It is to be further noted that Claims 11 and 18 require by their respective explicit limitations that the particular one compatibility parameter of said ALG file (hereinafter interchangeably referred to as “item 1” for the sake of illustration) is compared with both a compatibility feature of said bi-directional communications device (hereinafter interchangeably referred to as “item 2” for the sake of illustration) and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device (hereinafter interchangeably referred to as “item 3” for the sake of illustration). Thus, per Claims 11 and 18, item 1 is compared with both item 2 and item 3. That is, the same item 1 is compared to both item 2 and item 3.

In contrast, in setting forth the rejection, the Examiner has set forth the following reasoning with respect to items 1 and 2 (first comparison) above, relying upon O’Brien: “upgrade policy includes a digital signature that is compared by the upgrade agent to authenticate and verify the upgrade file” (Office Action, p. 10).

However, in further setting forth the rejection, the Examiner has set forth the following reasoning with respect to items 1 and 3 (second comparison) above, relying upon Smith: “Para. 0065 and 0066; the size of the header or body of the file is examined to determine if they are longer then they should be” (Office Action, p. 11).

Thus, according to the Examiner’s rejection, a comparison of digital signatures per O’Brien and a comparison of header (or file body) sizes per Smith cover all the above reproduced comparing recited in the pending claims. However, if the SAME particular one compatibility parameter is compared to BOTH a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device, THEN THE EXAMINER’S

PROPOSED COMBINATION IS CLEARLY DEFICIENT ON ITS FACE SINCE THE CLAIM EXPLICITLY EXCLUDES SIGNATURES FROM ITEM 3, AND SINCE ITEM 3 IS COMPARED TO ITEM 1, ITEM 1 CAN NEVER BE A SIGNATURE. That is, since item 1 (a particular one compatibility parameter of said ALG file) is compared to both item 2 (compatibility feature of said bi-directional communications device) and item 3 (a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device), then item 1 can never relate to a signature since that would mean that item 3 is a signature (in order to compare apples to apples, and not apples to oranges) which is explicitly prohibited (a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device) by the claim language.

Hence, initially the Examiner cited a digital signature from O'Brien as corresponding to the particular one compatibility parameter of said ALG file, and then cited a header or file body size as corresponding to the particular one compatibility parameter of said ALG file. Clearly, while the above reproduced claim limitations call for the SAME particular ONE compatibility parameter of said ALG file (to be compared to BOTH a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device), the Examiner's rejection uses a digital signature and a (header or file body) size as corresponding to the particular ONE compatibility parameter of said ALG file which clearly is incorrect.

Moreover, while the claims recite, *inter alia*, "comparing, at the bi-directional communications device, a particular one compatibility parameter of said ALG file with both a

compatibility feature of said bi-directional communications device...”, the Examiner has equated a digital signature comparison in O’Brien to the same. However, it is respectfully pointed out to the Examiner that a signature (as disclosed by O’Brien) relates to a file itself and has nothing to do with a compatibility feature of the bi-directional communications device.

Hence, it is clear from the onset that the Examiner has failed to set forth a prima facie rejection of the claims under 35 U.S.C. 103(a), as the Examiner has failed to show each and every element recited in the claims.

Hence, the cited combination fails to teach or suggest the above recited limitations of Claims 11 and 18.

Accordingly, Claims 11 and 18 are patentably distinct and non-obvious over the cited combination for at least the reasons set forth above. Therefore, withdrawal of the rejection and allowance of Claims 11 and 18 is earnestly requested.

F. Whether Claim 13 is Unpatentable Under 35 U.S.C. §103(a) With Respect to U.S. Patent No. 6,986,133 to O’Brien et al., in View of U.S. Patent Application No. 2002/0152399 to Smith, and Further in View of U.S. Patent No. 6,031,830 to Cowan

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art” (MPEP §2143.03, citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). “If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious” (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

The Examiner rejected Claim 13 as being unpatentable over 6,986,133 to O’Brien et al.

(hereinafter “O’Brien”) in view of U.S. Patent Application No. 2002/0152399 to Smith (hereinafter “Smith”) and further in view of U.S. Patent No. 6,031,830 to Cowan (hereinafter “Cowan”). The Examiner contends that the cited combination shows all the limitations recited in Claim 13.

O’Brien is directed to a “system and method for securely upgrading networked devices” (O’Brien, Title). In further detail, O’Brien discloses the following in his Abstract:

A system (FIG. 1) for upgrading deployed networked devices (4,6,8,10,12,14,16). The devices are enabled with an installed agent (FIG. 2 left) that can identify and communicate with a server (22) running the upgrade program. When the appropriate conditions are met the server downloads the upgrade to the agent that then installs the upgrade onto the deployed device. The device is made capable of polling the server to see if an upgrade is available, or, in the alternative, the server can locate the device, query the state of the device and, when the appropriate predetermined conditions are met, download the upgrade to the device.

Smith is directed to a “system and method for providing exploit protection for networks” (O’Brien, Title). In further detail, Smith discloses the following in his Abstract:

A method and system for providing protection from exploits to devices connected to a network. The system and method include a component for determining whether an encapsulation has been applied to an attachment and unencapsulating such encapsulated attachments, a component that performs at least one decompression of the attachment when the attachment is compressed, a component that determines whether a header, body, and/or attachment of a

message includes an exploit, and a component that holds and optionally cleans messages that include exploits. A device that receives messages that are directed to the network employs the components above to provide exploit protection for at least one of the messages.

Cowan is directed to “wireless software upgrades with version control” (Cowan, preamble).

In further detail, Cowan discloses the following in his Abstract:

A wireless communication system which includes a system backbone; a host computer coupled to the system backbone; at least one base station coupled to the system backbone, the at least one base station including a base station transceiver for communicating wirelessly with mobile devices within the system; at least one mobile device having a mobile device transceiver for communicating wirelessly with the host computer on the system backbone via the at least one base station; and wherein the host computer and the at least one mobile device are operatively configured to communicate selectively mobile device operating software therebetween based on an initial comparison in accordance with a predetermined criteria indicative of whether communication of mobile operating software therebetween is appropriate.

It will be shown herein below that the limitations of Claim 13 reproduced herein are not shown in the cited combination, and that Claim 13 should be allowed.

F1. Claim 13

Initially, it is respectfully pointed out to the Examiner that Claim 13 directly depends from independent Claim 1. Thus, Claim 13 includes all the limitations of Claim 1.

It is respectfully asserted that that none of the cited references, either taken singly or in combination, teach or suggest the following limitations recited in Claim 13 (with the following applicable to Claim 13 by virtue of its respective dependency from Claim 1):

comparing, at the bi-directional communications device, a particular one compatibility parameter of said ALG file with both a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device

Initially, prior to reproducing the arguments submitted in the Appeal Brief, the Applicants will address the Examiner's comments in the Examiner's Answer.

First, the Applicants note that the Examiner has relied upon an alleged teaching in O'Brien that an upgrade policy includes a digital signature that is compared by the upgrade agent to authenticate and verify the upgrade file regarding the recited comparing of the particular one compatibility parameter of said ALG file with a compatibility feature of said bi-directional communications device and has further relied upon an alleged teaching in Smith that the size of the header or body of the file is examined to determine if it longer than it should be regarding the recited comparing of the (SAME) particular one compatibility parameter of said ALG file with a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device. However, if the same particular one compatibility parameter is being compared to both a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature, the Examiner's proposed combination

does not make sense and seems to contravene (teach away from) the specific claim limitations, since the claims explicitly recite “a non-signature, non-code-error checking feature” (emphasis added). That is, what would be the purpose or motivation for such an odd and apparently useless combination as proposed by the Examiner where a digital signature (as disclosed by O’Brien) is compared to a “non-signature, non-code-error checking feature”. Thus, not only is any motivation to combine as proposed by the Examiner lacking, but the proposed combination is contrary to the explicit claim limitations and further makes no sense. This is more fully argued in greater detail herein below in the originally provided arguments of the Appeal Brief and also in the further argument below directed to the Examiner’s Answer.

The Examiner’s new argument in the Examiner’s Answer that “the term ‘compatibility parameter’ can be defined to include multiple elements which are all subparts of one ‘compatibility parameter’” (see, e.g., Examiner’s Answer, p. 15, lines 4-6) is misplaced and nonetheless fails to address the deficiency of the cited combination proposed by the Examiner where there is no usefulness or rationale for comparing a digital signature as disclosed by O’Brien against a non-signature, non-code-error checking feature as recited in the claims. For example, comparisons usually involve related items (e.g., apples to apples and NOT apples to oranges) and if one item is a digital signature and one is not, as proposed by the Examiner, then the rationale for performing such a comparison is completely lacking of purpose or rationale, and clearly does not correspond to the limitations recited in the pending claims. Given the preceding, the Examiner’s statement on page 17 of the Examiner’s Answer that “O’Brien alone is sufficient to disclose the limitations of Claims 1 and 16” seems erroneous and certainly does not cover the actual limitations recited in the pending claims but rather seems to teach away from the same.

Hence, the Examiner's further arguments in the Examiner's Answer still do not show that the pending claim limitations are anticipated or rendered obvious by the cited references.

The previous arguments from the Appeal Brief will now be reproduced for completeness.

It is to be further noted that Claim 13 requires by its respective explicit limitations that the particular one compatibility parameter of said ALG file (hereinafter interchangeably referred to as "item 1" for the sake of illustration) is compared with **both** a compatibility feature of said bi-directional communications device (hereinafter interchangeably referred to as "item 2" for the sake of illustration) and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device (hereinafter interchangeably referred to as "item 3" for the sake of illustration). Thus, per Claim 13, item 1 is compared with both item 2 and item 3. That is, the same item 1 is compared to both item 2 and item 3.

In contrast, in setting forth the rejection, the Examiner has set forth the following reasoning with respect to items 1 and 2 (first comparison) above, relying upon O'Brien: "upgrade policy includes a digital signature that is compared by the upgrade agent to authenticate and verify the upgrade file" (Office Action, p. 10).

However, in further setting forth the rejection, the Examiner has set forth the following reasoning with respect to items 1 and 3 (second comparison) above, relying upon Smith: "Para. 0065 and 0066; the size of the header or body of the file is examined to determine if they are longer then they should be" (Office Action, p. 11).

Thus, according to the Examiner's rejection, a comparison of digital signatures per O'Brien and a comparison of header (or file body) sizes per Smith cover all the above reproduced comparing recited in the pending claims. However, if the SAME particular one compatibility

parameter is compared to BOTH a compatibility feature of said bi-directional communications device and a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device, THEN THE EXAMINER'S PROPOSED COMBINATION IS CLEARLY DEFICIENT ON ITS FACE SINCE THE CLAIM EXPLICITLY EXCLUDES SIGNATURES FROM ITEM 3, AND SINCE ITEM 3 IS COMPARED TO ITEM 1, ITEM 1 CAN NEVER BE A SIGNATURE. That is, since item 1 (a particular one compatibility parameter of said ALG file) is compared to both item 2 (compatibility feature of said bi-directional communications device) and item 3 (a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device), then item 1 can never relate to a signature since that would mean that item 3 is a signature (in order to compare apples to apples, and not apples to oranges) which is explicitly prohibited (a non-signature, non-code-error checking feature expected in received and authentic ALG files by said bi-directional communications device) by the claim language.

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to the particular ONE compatibility parameter of said ALG file which clearly is incorrect.

Moreover, while the claims recite, *inter alia*, “comparing, at the bi-directional communications device, a particular one compatibility parameter of said ALG file with both a compatibility feature of said bi-directional communications device...”, the Examiner has equated a digital signature comparison in O’Brien to the same. However, it is respectfully pointed out to the Examiner that a signature (as disclosed by O’Brien) relates to a file itself and has nothing to do with a compatibility feature of the bi-directional communications device.

Hence, it is clear from the onset that the Examiner has failed to set forth a prima facie rejection of the claims under 35 U.S.C. 103(a), as the Examiner has failed to show each and every element recited in the claims.

Hence, the cited combination fails to teach or suggest the above recited limitations of Claim 13.

Accordingly, Claim 13 is patentably distinct and non-obvious over the cited combination for at least the reasons set forth above. Therefore, withdrawal of the rejection and allowance of Claim 13 is earnestly requested.

G. Conclusion

At least the above-identified limitations of the pending claims are not disclosed or suggested by the teachings of the cited references. Accordingly, it is respectfully requested that the Board reverse the rejections of Claim 1, 2, 4, 11-14, 16-18, and 21-32 under 35 U.S.C. 112 and §103(a).

No fee is believed to be due to accompany this submission. However, in the event of any non-payment or improper payment of a required fee, the Commissioner is authorized to charge **Deposit Account No. 07-0832** as required to correct the error.

Respectfully submitted,

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